

Discovery of a Piping Plover on Akimiski Island, James Bay, Nunavut

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Introduction

The James Bay coastline in summer offers a seemingly endless expanse of shorebird habitat of intertidal mudflats, raised beach ridges, and supratidal marshes (Morrison and Harrington 1979, Martini and Glooschenko 1987). Many shorebird species use this coastline habitat either as a stopover in their migrations or as their breeding ground. The richness of shorebird diversity from the James Bay region adds many breeding species to the Ontario Checklist that would be unusual or impossible to see in many other regions of the province.

The Piping Plover, *Charadrius melodus*, is a federally endangered species with two breeding populations in Canada,

one in the prairie provinces and the other in Atlantic Canada (Haig and Plissner 1993). The species is scarcely seen in Ontario and, until now, unprecedented in the James Bay region (Austen et al. 1994) or within Nunavut (Richards et al. 2002). In June 2007, a crew of field ecologists studying Marbled Godwits (*Limosa fedoa*), and Semipalmated Plovers (*Charadrius semipalmatus*) on the north coast of Akimiski Island in James Bay (Figure 1) discovered a single Piping Plover. The identification of this unique individual was well documented by a number of people and the details of this surprising discovery are provided in the following paper.

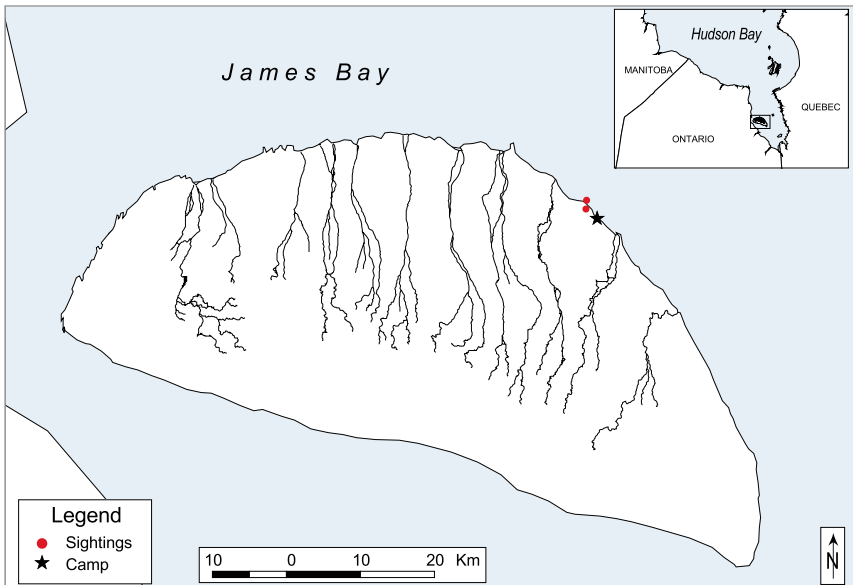
Photo: Carmen Lishman

Details of the Discovery and Observation

On 3 June 2007, American shorebird biologists Adrian Farmer and Bridget Olson, and the author, were studying Marbled Godwits on the north shore of Akimiski Island, Nunavut. On the trip back to the field camp, we walked through a mixed gravel-clay intertidal flat to one of the raised gravel ridges. It was a clear day, with excellent visibility and a light north wind. While walking along the length of the gravel ridge (53.12729° N, 80.97678° W), scanning for birds, a plover-sized bird moving in the mud substrate near the ridge (Figure 2), approximately 85 m from the observers, immediately caught the author's attention.

The first reaction was to identify it as a Semipalmated Plover, but its pale plumage was immediately recognized as being unusual. As it was approached, it pushed out into the mudflat farther from the gravel ridge. From the first observation with binoculars, it became clear that it was not a Semipalmated Plover, and we considered the possibilities together. The plumage was too light to be a Semipalmated Plover or a Common Ringed Plover. It was too small to be a Killdeer and lacked the two breast bands. The bill was orange and black, and its legs were orange, excluding it from being a Snowy or Mountain Plover (species with which Bridget is familiar).

Figure 1. Map showing the location of Akimiski Island in James Bay. Akimiski Island is part of Nunavut Territory, as are all islands in James Bay, however, it is adjacent to the northern Ontario community of Attawapiskat and is ecologically most similar to the western James Bay lowlands. *Map: Andrew Jano*



For over 15 minutes the three observed the bird and agreed that it was a Piping Plover. Lacking photographic equipment at that time, there was no further evidence than the three-person observation. As we continued down the ridge we heard the Piping Plover call, a very distinctive high-pitched, drawn-out, “*peep--peep--peep--peep*”, which improved the confidence in the bird’s identification at the time.

The second observation, presumably involving the same individual, although there is no certainty of that, was made late in the evening, around 1830h on 9 June 2007. Stacy Gan and the author were in the field west of camp on a calm day, with occasional rain squalls in the

afternoon, but clear with good visibility in the evening. We were approximately 2.5 km NW of camp (53.116405° N, 80.978878° W). The author was distracted, trying to read the colour combination of bands of a Semipalmated Plover, when Stacy pointed out another plover 20 m to the NW of us, that she described as “pale and puffed-out”. Being so focused on reading the bands, the author did not pay much attention at first. But, as Stacy persisted in calling attention to this different looking plover, it was given a closer look with binoculars, and was identified instantly as a Piping Plover (Figures 3, 4). This observation was more than 500 m farther inland from the open mudflat of

Figure 2. Typical James Bay coastline habitat used by many shorebird species. Photograph was taken at location of the first encounter with the Piping Plover (note the raised gravel ridge where territory was apparently established). *Photo: Carmen Lishman*





Figure 3. The adult Piping Plover discovered on Akimiski Island, James Bay. Photograph was taken on the second encounter shortly after its impressive aerial displays, trying to attract a mate and giving other indications of territorial behaviour.

Photo: Carmen Lishman



Figure 4. The adult Piping Plover discovered on Akimiski Island, James Bay. The photo was taken on the second encounter, on 9 June 2007.

Photo: Carmen Lishman

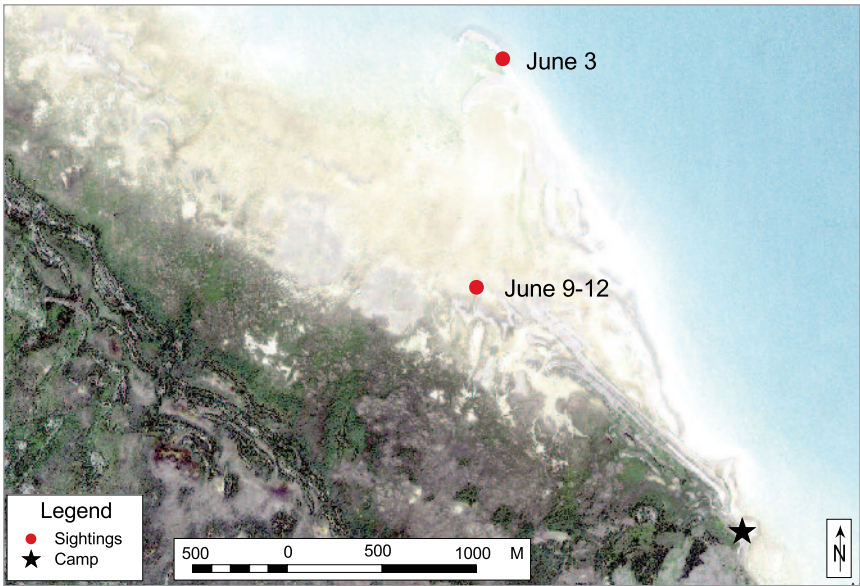


Figure 5: IKONOS satellite image of the north coast of Akimiski Island, taken 2 July 2003, showing the location of the Piping Plover sightings. Photo courtesy of Ontario Ministry of Natural Resources. Map: Andrew Jano

the bay where the first observation took place. Since the previous days had been spent examining field guides at camp and listening to “Birding by Ear” recordings of calls, the identification of this individual as a Piping Plover was made instantly and with confidence.

Radio communication was sent immediately to Ken Abraham, Adrian Farmer and Jessica Plourde, who were west of Stacy and Carmen, still working to capture Marbled Godwits. They transmitted a communication to the field camp requesting that the staff there bring tripods and cameras out to document the plover. Within an hour there were eight observers on site (those listed, as well as Steve Marson, Austin Taverner and Mike Banko). As everyone converged, the Piping Plover flew up into

the air and began the characteristic ‘piping’ aerial displays within metres of the observers. This bird, presumably having established a territory at this site and trying to attract a mate, was persistent in its piping displays throughout the evening, and the observers were in awe of the quality of the observation. Each time the plover landed, it demonstrated a territorial attachment to the gravel ridge site (a mixture of gravel, clay and alkali grass *Puccinellia phryganodes*), unwilling to be pushed off by the pesky photographers. Steve Marson was able to take some excellent pictures of the plover, and others were taken with small digital cameras or through binoculars and spotting scopes. The crew left the area at sundown, around 2140h, with the bird remaining in the same location.

The third encounter with the Piping Plover was at the same location, between 1945h and 2200h on 10 June 2007, by a group of nine people (those listed above, as well as Emily Morton and Patrick Hubert). On this visit, the plover was at first quiet on its territory, but began once again performing its piping aerial displays and vocalizing regularly. During aerial displays, the vocalizations were bold, clear, constant pipes, and on the ground were much fainter spaced out “*peep... peep... peep.*” We left the plover in the same location once again at sundown.

The fourth and final encounter was on 12 June 2007, when the author, Stacy Gan, Emily Morton and Mike Banko saw the Piping Plover at the same location while passing by late in the morning, around 1030h. The bird vocalized a little, but was not performing its aerial displays.

On several occasions after this date, the location where the Piping Plover had apparently established its territory was visited and scanned for its presence, but it was not seen again.

Discussion

The bird we saw on Akimiski Island was certainly a Piping Plover. This is a confident identification given the unique characteristics of the species, distinguishing it from any similar plover species: light-coloured plumage; incomplete, single, black breast band; orange legs, orange and black bill, and

characteristic vocalizations. In addition, the identification comes with the endorsement of all the observers that were present, including well-respected field ornithologists and experienced bird-watchers.

The sex of the individual could not be determined from plumage, but all agreed that it was likely a male. Haig and Elliot-Smith (2004) showed that it is the male Piping Plover that establishes and maintains a territory while giving aerial displays directly above the territory, to attract breeding females. The individual seen on Akimiski Island was indisputably demonstrating this characteristic aerial display, and its persistence in remaining in the same location over the course of several days is another strong indication of territoriality (Haig and Elliot-Smith 2004).

The question that arises from this unusual observation is the origin and fate of this displaced individual. Akimiski Island is roughly equidistant to both portions of the species' breeding range in Canada, over 1000 km southeast or southwest, so it is incautious to speculate which population it came from originally. Since the individual was not marked in any way, its movements before and after this observation are completely unknown. Nonetheless, it was a surprising and fascinating observation of an individual far from its natural breeding range. There has been some documentation in recent years of stray Piping Plovers in Ontario, and a

successfully breeding pair on Sauble Beach in 2007 (Cartwright 2007). Communications of stray individuals are important and interesting, as they could be early indications of range expansion of the species in Canada. Given the quality of shorebird habitat in James Bay, it would not be very surprising to see additional observations in the years to come. Continuing the avian research programs in James Bay and on Akimiski Island is critical for this type of natural history documentation, which would otherwise be impossible.

Acknowledgements

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